

## ABSTRACT OF THE DISCLOSURE

A heavy metal adsorbent composition configured for use as a mercury adsorbent composition, agent or product is shown. The mercury adsorbent composition comprises a natural diatomite in the form of siliceous frustules of diatoms having a surface punctuated by a series of openings defining frustule structures having sizes in the range of about 0.75  $\mu\text{m}$  to about 1,000  $\mu\text{m}$ . The diatoms have the surfaces thereof treated with an activating material capable of removing mercury by chemical bonding forming surface treated diatoms which when brought into contact with a mercury containing fluid react with mercury to cause mercury to separate from the fluid by chemical bonding to the surface treated diatoms.

269 5644abstract031504final